

Docket No. F-7889

Ser. No. 10/616,324

REMARKS

Claims 1 and 2 remain pending in this application. Claims 1 and 2 are rejected. Claims 1 and 2 are amended herein solely to attend to formal matters not addressed by the Examiner and accordingly are considered unrelated to substantive patentability issues.

Claims 3-20 are withdrawn by the Examiner and are cancelled herein by the Applicant so as to facilitate efficient prosecution without reproduction of each and every claim withdrawn; however, applicant reserves right to reintroduce said claims 3-20 should the Examiner fail to produce further art supporting the rejection set forth by the Examiner. It is submitted that the present art offering of the Tokura reference is insufficient to support the rejection.

CLAIM REJECTIONS UNDER 35 U.S.C. § 102(b)

Claims 1 and 2 are rejected under 35 U.S.C. § 102(b) as being anticipated by the Tokura reference. Applicant herein respectfully traverses these rejections. "Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*" *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984) (emphasis added). It is respectfully submitted that the cited reference is deficient with regard to the following.

Docket No. F-7889

Ser. No. 10/616,324

In order to effectively address the rejections set forth in the Office Action it is believed that a brief explanation of the invention of claims 1 and 2 would be helpful for the Examiner to better appreciate the claimed features.

The invention according to claim 1 is an image forming system including a computer, a first image forming apparatus (monochrome), and a second image forming apparatus (color). The claimed invention recites the aforementioned hardware executing a series of processes as follows:

(1) When the job data is received, the computer divides the job into color data and monochromatic data and allocates the divided job to the first image forming apparatus and the second image forming apparatus.

(2) A) The computer firstly transmits the monochrome job to the first image forming apparatus and completes the job, and then receives a job-completion signal from the first image forming apparatus.

B) Further, the computer receives a job-continuation signal (a signal indicating that recording material on which a monochromatic image is formed is set on the post-processing tray of the second image forming apparatus) from the second image forming apparatus.

Docket No. F-7889

Ser. No. 10/616,324

C) Finally, the computer transmits a color job to the second image forming apparatus.

(3) Lastly, the second image forming apparatus checks page numbers included in the color job, and discharges monochrome-printed materials and color-printed materials while serializing their page numbers in a sequential page order which is originally indicated by the job.

In the invention according to claim 1, the processes (1) and (2) described above are executed. In other words, when the job data is received, the computer divides the job into color data and monochromatic data and allocates the divided job data to the first image forming apparatus and the second image forming apparatus. At this time, the computer firstly transmits the monochrome job data to the first image forming apparatus and completes the job, and then receives a job-completion signal from the first image forming apparatus. The computer next receives a job-continuation signal from the second image forming apparatus when the materials from the first image forming apparatus are set on the post-processing tray, and then transmits a color job to the second image forming apparatus.

In the device disclosed in the Tokura reference, a job is divided into color and monochrome data and printed by different image forming apparatuses. However, in contrast to the presently claimed invention, a print timing control based on a signal

Docket No. F-7889

Ser. No. 10/616,324

transmission and receipt is not executed. In particular, it is respectfully submitted that the Tokura reference lacks the following : a data-transmitting/receiving configuration (d) of the computer, a job-completion detection means (b) of the first image forming apparatus, and a job-process-continuation-signal input means (d) of the second image forming apparatus.

Claim 1 recites that the computer has the following:

(d) a data-transmitting/receiving configuration for transmitting said monochromatic print job data to said first image forming apparatus via said network, and *transmitting said color print job data to said second image forming apparatus via said network in response to reception of a job-process-continuation signal from said second image forming apparatus after receiving a job-completion signal from said first image forming apparatus [.]*

(Emphasis added.) The job-completion signal is generated by the first image forming apparatus in accordance with the following feature of the first image forming apparatus in claim 1:

(b) job-completion detection means for detecting completion of said monochromatic print job and then outputting said job-completion signal to said computer[.]

Furthermore, the job-process-continuation signal is generated by the second image forming apparatus in accordance with the following feature of the second image forming apparatus in claim 1:

(d) job-process-continuation-signal input means for entering said job-process-continuation signal there through, wherein said job-process-continuation-signal input means is adapted to *allow*

Docket No. F-7889

Ser. No. 10/616,324

said job-process-continuation signal to be output to said computer only after said first recording materials with monochrome images formed by said first image forming apparatus are set on said post-processing tray of said post-processing device[.]

(Emphasis added). Thus, the second image forming apparatus only receives the color print job data after the first image forming apparatus completes printing the first recording materials and the first recording materials are detected as being placed on the post-processing tray of the post processing device. Finally, the image formation control means of the second image forming apparatus operates to effect "switching respective operations of said recording-material feed means and said post-processing means to allow color pages and monochrome pages to be mixed together on said recording-material discharge tray while serializing the page numbers thereof in sequential order." Thus, the printing of the color pages is delayed until the monochrome pages are printed and detected in the post processing tray of the post-processing device of the second image forming apparatus. This allows the color pages to be printed and discharged along with the monochrome pages, which are already printed and waiting, in serial page order using the recording-material mixing configuration for checking page numbers and switching the operations of the recording-material feed means and the post-processing means to mix the color and monochrome pages together on the same discharge tray. Tokura reference lacks such a disclosure.

Docket No. F-7889

Ser. No. 10/616,324

In the invention disclosed in Tokura, such a material conveyance control and signal transmission are not executed at all. The cited paragraph [0038] of the Tokura reference merely discloses obtaining of information of a connected sorter and it does not disclose the control of checking page numbers included in the color job, signal transmission regarding the monochrome-printed recording materials and color printed materials placed in the post-processing section, and controlling which of the recording materials are to be conveyed. Indeed, the Tokura reference discloses in Fig. 1 separate printers 120 and separate ejectors 130 and does not disclose any of the printers accepting output from another of the printers or mixing the output of two printers together in sequential order.

The invention according to claim 2 is similar to the invention according to claim 1. In the invention according to claim 1, the job is divided into color data and monochromatic data. The invention according to claim 2, differs from that of claim 1 in that the job is divided in accordance with "a given dividing rule", which is not limited to dividing of the job into color data and monochromatic data. the divided job data is then allocated to image forming apparatuses (the number of image forming apparatuses is not limited to two). Additionally, the computer of claim 2 does not limit transmission of the plural job data until receipt of a job completion detection signal. However, the following features of claim 2 are similar to those of claim 1 and claim 2 is accordingly submitted as distinguishing over the Tokura reference because

Docket No. F-7889

Ser. No. 10/616,324

the Tokura reference fails to provide a mechanism for outputting pages from two different printing apparatuses in a serialized manner as claimed.

In particular, claim 2 recites that the at least one image forming apparatus includes:

(d) job-process-continuation-signal input means for entering a job-process-continuation-signal therethrough, wherein said job-process-continuation-signal input means is adapted to *allow said job-process-continuation signal to be output to said computer only after second recording materials with images formed by another one of said image forming apparatuses are set on said post-processing tray of said post-processing device,*

(emphasis added) and an image-formation control means having:

(1) a configuration for switching an operation of said post-processing device in such a manner that in response to said job-process-continuation signal entered from said job-process-continuation-signal input means, *said first recording materials with images formed by said image formation means are discharged directly onto said recording-material discharge tray through said first discharge section, and said post-processing section serves as a second discharge section to discharge said second recording materials from said post-processing tray onto said recording-material discharge tray without subjecting said second recording materials set on said post-processing tray to said post-processing, and*

(2) a recording-material mixing configuration for checking *said page numbers* of said job data transmitted from said computer, and *switching said respective operations* of said recording-material feed means and said post-processing device *to allow said second recording materials with images formed by said another image forming apparatus and said first recording materials with images formed by said image formation means to be mixed together on said recording-material discharge tray while serializing the page numbers thereof in sequential order.*

Docket No. F-7889

Ser. No. 10/616,324

(Emphasis added.) Claim 2 possesses the above structure not found in the Tokura reference. The mixing configuration permits printed output in the form of said first recording materials and said second recording materials to be output onto the "recording-material discharge tray while serializing the page numbers thereof in sequential order." Such a disclosure is lacking in the Tokura reference. As noted above, the Tokura reference discloses in Fig. 1 separate printers 120 and separate ejectors 130 but does not disclose any of the printers accepting output from another of the printers and mixing the output of two printers together in sequential order.

In view of the above, it is respectfully submitted that claims 1 and 2 particularly describe and distinctly claim elements not disclosed in the cited reference. Therefore, reconsideration of the rejections of claims 1 and 2 and their allowance are respectfully requested.

NO FEE DUE

No fee is believed due. If there is any fee due the USPTO is hereby authorized to charge such fee to Deposit Account No. 10-1250.

Docket No. F-7889

Ser. No. 10/616,324

In light of the foregoing, the application is now believed to be in proper form
for allowance of all claims and notice to that effect is earnestly solicited.

Respectfully submitted,
JORDAN AND HAMBURG LLP

By *F. J. Jordan* *by H. F. Ruschmann*
Frank J. Jordan
Reg. No. 20,456
Attorney for Applicants
and,

By *H. F. Ruschmann*
Herbert F. Ruschmann
Reg. No. 35,341
Attorney for Applicants

Jordan and Hamburg LLP
122 East 42nd Street
New York, New York 10168
(212) 986-2340